

ATTACHMENT - REMARKS

The Amendment filed herewith is responsive to the Final Rejection mailed March 23, 2010. Claims 1-3, 5-14, 16-19, 22, and 24-29 remain present in this application, wherein claim 1 has been amended in order to more clearly bring out the patentable features of the present invention.

Allowance of claims 22 and 24-29 has been noted.

The specification and Figure 1 have been amended in order to satisfy Rule 1.83 since certain claimed details of the lower opening of the guide bushing which were described in the specification but not shown in the drawings are now represented schematically in the drawings. Because this change merely adds to the drawings elements already described in the specification, no new matter has been added.

The present invention is directed specifically to a punching tool. A punching tool is characterized by having a guide bushing which has reciprocally slidable therein a die plunger which is acted upon by a driving mechanism to effect punching or the like and a punching die attached to the die plunger, the latter actually engaging the workpiece. In this specific device, the punching die must be removable from the die plunger so as to be changed for each job to match the shape of the hole or the like to be punched through the workpiece of the next job.

To show that this specific item, a punching tool, is well-defined in the art, the Examiner is directed to the following issued U.S. Patents: Johnson et al., U.S. Patent No. 5,054,347; Wilson et al., U.S. Patent No. 5,131,303; Rosene et al., U.S. Patent No. 5,752,424; Schneider et al., U.S. Patent No. 5,832,798; Johnson, U.S. Patent No. 5,884,546; and Schneider et al., U.S. Patent No. 6,196,103.

The present invention is an unobvious advancement in an important feature of this specific device, a punching tool. More specifically, it provides a new, unobvious, clever and highly advantageous way to effect changing of the punching die.

In accordance with the present invention, the punching die is inserted through the front or lower end of the guide bushing up into a bore in the die plunger. An elastic element reacts against the inside of the guide bushing to force holding elements such as balls against a groove in the punching die with sufficient force to firmly hold the punching die in place even in the presence of very strong forces which are exerted on the die plunger by the driving mechanism. And although this structure exerts a very strong force to hold the holding elements into engagement with an annular groove in the punching die, removal of the punching die from the die plunger is made amazingly simple as one simply moves the die plunger and punching die downwardly until the holding elements and the elastic element are outside the confines of the guide bushing, whereupon the elastic element naturally expands, releasing the holding elements from the punching die and permitting simple hand removal of the punching die.

Although it is believed that the specific device to which the present invention is directed, a punching tool, was specifically recited in the previous claims to an extent that the cited references should not have been applied against these claims, claim 1 has been further amended in order to even more clearly and positively bring out the features of the present invention.

Claims 1-3, 5-8, 11-14, 16, 17 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Pancook, U.S. Patent No. 3,628,231 in view of Wei, U.S. Patent No. 5,528,963.

Whatever the relevance or lack thereof of the cited references to previous claim 1, it would be clearly erroneous to apply those references to claim 1 as amended herein.

To start with, Pancook is not a punching tool. It is a tool loader and unloader. Whatever few similarities it may to a punching tool, it remains a tool loader and unloader which effects all of its loading and unloading movements from an upper power source. It is essentially incomprehensible that Pancook would suggest the very idea of a simple mechanism for engaging and removing a punching die as claimed in the present invention.

Referring to Figure 3 of Pancook, many of the recitations of amended claim 1 are not present in this figure. The elements 88 constitute a rigid retaining rod having small balls at their interior ends and larger balls at their exterior ends. No elasticity is provided. To release the inner balls of 88 from the groove 86, the element 81 is driven downwardly only to a groove 87 where they are free to move outwardly enough to release the shank 85. But in fact this outward movement may not occur because of the presence of oil so that the plunger 50 is then needed to positively push the shank 85 further down than the level of groove 87. At no time do rods 88 move out of the lower end of element 41, and of course it is never remotely suggested that there be an elastic element having the capacity to move outwardly after the holding elements move out below the opening of element 14. Moreover there is no suggestion whatsoever as to any advantage or reason for using an elastic element.

Figures 6 and 7 of Pancook are no more relevant to the present invention than is Figure 3. The resilient element in grooves 87a do not stay in alignment with the

balls 88a and never move out the open bottom of the element 14, with or without the balls 88a. All downward movement of the shaft 85a is effected only by the plunger 50.

Given the complex nature of Pancook's apparatus, there is absolutely no suggestion, teaching or motivation, nor would it involve common sense or predictability to totally rebuild Pancook to arrive at the present invention.

The overwhelming shortcomings of the Pancook reference, i.e., the very considerable gap between what is shown in Pancook and what is claimed herein, cannot possibly be filled by Wei. Hence it would not possibly be appropriate to modify Pancook to supply all of the missing claim 1 features by reference to Wei.

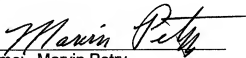
Wei is neither a punching tool nor anything remotely resembling a punching tool and hence its use even as a secondary reference is highly inappropriate. Even the Examiner's rejection applied Wei in a limited way, namely to show a washer to lock a rod. But this teaching of a washer holding a rod in a totally non-analogous irrelevant reference does not justify its use as a secondary reference because Wei clearly does not supply any teaching, motivation, suggestion, common sense or predictability to so totally overhaul Pancook to arrive at the present invention.

In view of the above, it is respectfully submitted that this application is now in condition for allowance, which action is promptly and respectfully solicited.

Respectfully submitted,

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